

Material Safety Data Sheet

Number: **DMN0115**

Product Name: **Liquid Soldering Flux**

Metal halide flux.

Revised: 4/12/11

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Section 2 - Composition / Information on Hazardous Ingredients

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Percent</u>	<u>Carcinogen</u>
Ammonium Chloride	12125-02-9	10 - 20%	No
Zinc Chloride Fume	7646-85-7	40 - 60%	No

Section 3 - Hazards Identification

Emergency Overview: Liquid is very irritating or corrosive to the eyes and irritating to the skin. Skin may sensitize to zinc chloride. Excessive inhalation of soldering fumes causes irritation. Product is water based and does not burn. Product should not be allowed into storm sewers and no more than one-half gallon into sanitary sewers. Will release chlorine gas if mixed with bleach. A pink liquid with a wintergreen odor.

Health Hazards: Irritant, Sensitizer

Physical Hazards: None

Primary Routes of Entry: Through Skin Inhalation Ingestion

Potential Health Effects:

Eyes - causes severe irritation.

Skin - causes irritation, redness. May cause contact dermatitis and sensitization.

Swallowing - causes severe irritation to mucous membranes.

Breathing - excessive inhalation of soldering fumes causes irritation of the mouth, nose, throat and respiratory passages. May cause metal fume fever, a flue-like condition from which complete recovery generally occurs without intervention within 24 to 48 hours.

Section 4 - First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

Skin Contact: For brief contact, or contact with diluted product, wash exposed skin with soap and water. With longer contact or when redness or irritation are present, flush the exposed skin with running water for 15 minutes. Remove contaminated clothing and shoes. If redness, irritation or other symptoms exist after flushing, get medical attention immediately. Wash clothing before reuse.

Inhalation: Move the affected person to fresh air. If irritation, coughing or other symptoms persist, get medical attention immediately.

Ingestion: If the product is swallowed, do NOT induce vomiting. If affected person is conscious, give a glass of water or milk to drink. Treat for shock by keeping the person warm and quiet. Get medical attention immediately.

Section 5 - Fire-Fighting Measures

Flash Point: None (ASTM D-56 closed cup)

Lower Explosive Limit: Not Applicable

Upper Explosive Limit: Not Applicable

Extinguishing Media: Any

Special Fire Fighting Procedures: None.

Unusual Fire And Explosion Hazards: None.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Clean up small spills with a rag or mop. Wash the area with an alkaline detergent or a 50% solution of baking soda. Spills of one-half gallon or less can be washed to the sanitary sewer with plenty of water. Larger spills should be diked to prevent spreading and then collected into clean pails or drums.

Section 7 - Handling and Storage

Empty containers retain product residue and may be hazardous. Observe all precautions given in this data sheet and on label. Keep container closed.

If this product contacts bleach or a cleaner containing bleach, it could produce a dangerous gas (chlorine). If your facility uses bleach, or a cleaner containing bleach, look at the MSDS on the bleach product now, to learn what to do if chlorine is accidentally produced. Your facility should decide upon the appropriate emergency action plan for accidental release of chlorine as a part of your emergency preparedness plan. Contact Damon Industries if more information is needed.

Section 8 - Exposure Controls / Personal Protection

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Percent</u>	<u>TWA(source)</u>	<u>STEL</u>	<u>Ceiling</u>
Ammonium Chloride	12125-02-9	10 - 20%	10 mg/m ³	20 mg/m ³	-
Zinc Chloride Fume	7646-85-7	40 - 60%	1 mg/m ³	2 mg/m ³	-

(1)=OSHA (2)=NIOSH (3)=ACGIH (4)=CANADA TWA=8 hr Time Weighted Average STEL=15 minute TWA Ceiling=Instantaneous

Ventilation: Use mechanical exhaust to maintain airborne concentrations below the exposure limits.

Respiratory Protection: If the exposure limit will be exceeded or fumes are irritating during use, wear a NIOSH approved respirator with a cartridge approved for zinc chloride fumes.

Protective Gloves: Use rubber or latex gloves.

Eye Protection: Wear safety glasses with side shields or chemical goggles or face shield.

Other Protective Equipment: If splashing is likely to occur wear aprons, protective clothing or boots as the situation calls for.

Section 9 - Physical and Chemical Properties

Boiling Point: 230° F. **Vapor Pressure:** 28 mm Hg @ 68° F.
Specific Gravity: 1.16 **Vapor Density:** 1.2 (Air = 1)
Percent Volatiles: 100% **Evaporation Rate:** 2.0 (Water = 1)
Solubility In Water: Complete **pH:** concentrate 1.0 ± 0.5
Appearance and Odor: A pink liquid with a wintergreen odor.

Section 10 - Stability and Reactivity

Incompatibility: Alkalis, bleach, oxidizers.

Hazardous Decomposition Products: None

Section 11 - Toxicological Information

Target Organs: None.

Section 12 - Ecological Information

Do not dispose of in the environment.

Section 13 - Disposal Considerations

Waste Disposal Method: Up to one-half gallon may be washed to the sanitary sewer with a large amount of water. Larger amounts should be neutralized to within pH limits of your waste water system and then disposed of in the sanitary sewer.

Section 14 - Transport Information

D.O.T. Hazard Class: Zinc-Ammonium Chloride is not considered hazardous by the D.O.T.

Section 15 - Regulatory Information

The components of this product are on the TSCA inventory of chemical substances.

Section 313 Supplier Notification: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and CFR 372.

<u>Chemical Name</u>	<u>C.A.S. No.</u>	<u>% By Weight</u>	<u>Lbs./Gallon</u>
Zinc chloride	7646-85-7	68%	4.3

Section 16 - Other Information

NFPA: H:3 F:0 I:2 **HMIS® III:** H:3 F:0 P:2 These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

Replaces sheet dated 3/10/05.

The information accumulated herein is believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.